

SELF-POLISHING AND TAPPING RIVET ASSEMBLY

ABSTRACT

A blind setting rivet assembly capable of permanently fastening one or more sheet metal work pieces or the like together is disclosed. The rivet assembly may be self polishing and self tapping and may also provide a hollow cylindrical threaded bolt head onto which a nut may be affixed to provide a means to removably attach other work pieces, components or the like. The rivet assembly comprises a rivet body having a hollow tubular sleeve and an enlarged flattened head. The rivet body surrounds a mandrel that may have a weakened area of reduced diameter to allow detachment of the mandrel shaft following application of sufficient axial force to the shank. This application of force sets the rivet by causing a tapered shoulder section of the mandrel to deform the rivet sleeve. The mandrel shank may be terminated in a screw tip. This screw tip punctures, spreads, self-taps, and self-polishes an aperture in the work pieces through which the rivet sleeve passes. The mandrel's shank may have a weakened area of reduced diameter adjacent to the screw tip that allows detachment of shaft following application of sufficient axial force to the shank. This application of force causes the tapered shoulder section of the screw tip to compress and deform the rivet sleeve setting the rivet.